

## **CLAIMS**

What is claimed is:

1. A method for automatic system provisioning for an optical network by a network management system, comprising:
  - 5 detecting a new equipment to be provisioned in the optical network, the new equipment being of an equipment type;
  - automatically selecting a predefined default equipment template corresponding to the type of the new equipment, the selected predefined equipment template comprising a set of equipment parameters and associated predefined values; and
  - 10 automatically provisioning the new equipment using the predefined values associated with the set of parameters contained in the default equipment template.
2. The method for automatic provisioning of claim 1, wherein the automatically selecting comprising selecting from a set of predefined default equipment templates, the set of predefined default equipment templates including at least one default equipment template selected from the group consisting of DS3, DS1, OC3, OC48, OC12, and OC192 equipment templates.

3. The method for automatic provisioning of claim 1, further comprising:  
automatically determining if there is a default equipment protection  
template corresponding to the equipment type;  
automatically selecting a default equipment protection template  
5 corresponding to the equipment type of the new equipment, the selected default facility  
template comprising a set of equipment protection parameters and associated predefined  
values; and  
automatically provisioning equipment protection for the new equipment  
using the predefined values associated with the set of equipment protection parameters  
10 contained in the corresponding default equipment protection template.

4. The method for automatic provisioning of claim 3, wherein the new  
equipment is one of equipment type DS1 and DS3.

15 5. The method for automatic provisioning of claim 1, further comprising:  
automatically selecting a default facility template corresponding to a facility  
of the new equipment, the selected default facility template comprising a set of facility  
parameters and associated predefined values; and  
automatically provisioning the facility of the new equipment using the  
20 predefined values associated with the set of facility parameters contained in the  
corresponding default facility template.

6. The method for automatic provisioning of claim 1, wherein the detecting of the addition of the new equipment comprises receiving a notification transmission from one of the new equipment and a network element, the new equipment being part of the network element.

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7. The method for automatic provisioning of claim 1, wherein the detecting of the addition of the new equipment comprises:

transmitting inventory requests to network elements of the network;

receiving responses to the inventory requests from the network elements;

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comparing an equipment database of the network management system with the responses to detect new equipment to be provisioned.

8. A system for automatic system provisioning for an optical network by a network management system, comprising:

    a network interface for receiving information from network elements of the optical network;

5       a processor configured to automatically detect a new equipment to be provisioned in the optical network based on the received information from the network elements, the new equipment being of an equipment type, the processor is further configured to automatically select a predefined default equipment template corresponding to the type of the new equipment, the selected predefined equipment template comprising  
10      a set of equipment parameters and associated predefined values,  
                wherein the processor is configured to automatically transmit via the network interface the predefined values associated with the set of parameters contained in the default equipment template to automatically provision the new equipment.

15       9. The system for automatic provisioning of claim 8, wherein the processor is configured to automatically select the template from a set of predefined default equipment templates, the set of predefined default equipment templates including at least one default equipment template selected from the group consisting of DS3, DS1, OC3, OC48, OC12, and OC192 equipment templates.

10. The system for automatic provisioning of claim 8, wherein the processor is further configured to:

automatically determine if there is a default equipment protection template corresponding to the equipment type of the new equipment,

5 automatically select a default equipment protection template corresponding to the equipment type of the new equipment, the selected default facility template comprising a set of equipment protection parameters and associated predefined values;

and

automatically transmit via the network interface the predefined values

10 associated with the set of equipment protection parameters contained in the default equipment protection template to automatically provision the new equipment.

11. The system for automatic provisioning of claim 10, wherein the new equipment is one of equipment type DS1 and DS3.

15 12. The system for automatic provisioning of claim 8, wherein the processor is further configured to:

automatically select a default facility template corresponding to a facility of the new equipment, the selected default facility template comprising a set of facility parameters and associated predefined values and

20 automatically transmit via the network interface the predefined values associated with the set of facility parameters contained in the corresponding default facility template to provision the facility of the new equipment.

13. The system for automatic provisioning of claim 8, wherein the network interface is further configured to receive a notification transmission from one of the new equipment and a network element, the new equipment being part of the network element.

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14. The system for automatic provisioning of claim 8, wherein the process is further configured to:

transmit inventory requests to network elements of the network via the network interface.

receive responses to the inventory request via the network interface, and compare an equipment database of the network management system with the responses to detect new equipment to be provisioned.